

REMARKS

Claims 1-16, 19-21, and 26-43 are currently pending and have been amended. Claims 17-18 are withdrawn. Claims 22-25 and 44-60 are canceled without prejudice. Reconsideration of the application is requested.

§ 103 Rejections

Claims 1-16 and 19-43 were rejected under 35 USC § 103(a) as being unpatentable over CARUSO et al. (US 6,479,146) in view of HEMMI et al. (Nature Immunology, 2002) and in view of HAINFELD et al. (US 5,521,289). Applicants respectfully traverse.

The three cited references, alone or in combination, fail to enable how one would attach an IRM compound of the type claimed to a metal-containing particle and, importantly, whether the IRM compound would remain biologically active after being attached. At the time of the invention it was not understood whether the TLR 7 and 8 receptors themselves were inside or on the surface of the immune system cells. Nor was the mechanism understood by which the claimed IRM compounds of the invention interacted with the TLR 7 and 8 receptors -- directly, indirectly, via an intermediary, etc. Accordingly, one of ordinary skill in the art would not have had any realistic basis to believe that the IRM compounds of the invention would remain biologically active if attached to metal-containing particles.

While CARUSO et al. discloses various nanoparticles with drugs, it appears that the passage at col. 5, lines 38-46, is about encapsulation of the drug *within* hollow shells, not adhering the drug “on” the particles as required by the present claims.

HEMMI et al. discloses certain IRM compounds, but provides no suggestion that one would want to attach them to metal-containing particles (or how to) or that they would remain active.

HAINFELD et al. discloses metal cores functionalized for attachment to other molecules, including drugs, as stated in the Office Action, but there is no suggestion to do so with IRM compounds of the claimed invention or that such compounds would remain active TLR 7 and/or 8 agonists when so attached. Nor does HAINFELD et al. provide any teaching of how compounds of the claimed invention would actually be attached to the particles.

In view of the above, it is submitted that the application as amended is in condition for allowance. Consideration and favorable action are therefore requested.

Respectfully submitted,

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By: /Ted K. Ringsred/

Ted K. Ringsred, Reg. No.: 35,658

Telephone No.: 651-736-5839

Office of Intellectual Property Counsel
3M Innovative Properties Company
Facsimile No.: 651-736-3833